DRAFT 6
August 21, 2001 Revision
NAO 217-103
Management of NOAA Small Boats

SECTION 1. PURPOSE.

.01 This Order establishes National Oceanic and Atmospheric Administration (NOAA) policy for management and operation of boats less than 300 gross tons.

.02 This Order establishes minimum standards and required inspections to be followed by all NOAA activities operating boats.

.03 This Order provides policy and guidance for NOAA activities to conduct risk assessments and to develop operational risk management plans for marine operations.

SECTION 2. BACKGROUND.

Operating small craft in support of marine research involves unique associated risks. Many NOAA Line Offices rely on small boats to achieve mission requirements. There is a myriad of regulatory standards that address motorboat safety, but little guidance or regulation tailored specifically to the special employment of small research vessels less than 300 gross tons. Current marine standards are derived from international conventions, lessons learned from casualties, and advances in technology. As such, the body of regulatory information continues to grow and change. All vessels owned by NOAA are considered public vessels and therefore exempt from compliance with, or regulatory oversight by, the United States Coast Guard. It is NOAA's intent, as stewards of the Nation s oceans and atmosphere, to comply with, or exceed, all applicable regulatory and industry standards and to foster a management culture committed to safe and environmentally sound boat operations based upon the principles of operational risk management.

SECTION 3. DEFINITIONS.

.01 Acquire. To gain ownership of things with out monetary cost.

.02 Alteration and Repair of Small Boats.

a. Alteration or Modification. Any addition, deletion, and/or change to the original, as delivered, configuration of a boat, especially with regard to its hull, propulsion, electronic, navigation,

communication, mission, structural, mechanical, and electrical systems that affect weight, performance, stability, outfitting, layout, capabilities, and safety.

b. Significant Alteration or Modification. An addition, deletion, and/or change to the original, as delivered, configuration of a boat, with regard to its hull, mechanical, and electrical systems that affect displacement, stability, length overall, or safety. Examples of a significant alteration or modification include, but are not limited to; the addition of superstructure and/or winches for fishing operations, the addition of any weight handling gear (A-frame, crane, articulated boom), replacement of propulsion engines, installation of generators, or lengthening of a vessel.

c. Repair. A restoration of a boat's original configuration or capability that is necessary because of wear and/or failure of its systems and equipment. A repair involving a one-for-one replacement of a component with a different brand or design may be considered an alteration if there is an element of risk or uncertainty with regard to the affects outlined in Section 3.02.a.

.03 Boat. As used in this Order refers to all craft propelled by any means and capable of being used on a body of water, but does not include sea planes.

.04 Gross Tonnage. A uniform method of measuring vessels frequently used for regulatory applications. Gross tonnage is calculated by the formula: $((L \times B \times D) \times 0.67) \div 100$, where L is registered length, B is maximum moulded beam, D is depth of vessel from the upper most continuous deck to the deepest section of the keel.

.05 Length Overall. The length of a boat, measured in feet, from the after most integral portion of the hull to the forward most integral section of the hull.

.06. Motorboat. As used in this Order, refers to all craft propelled by machinery and capable of being used on a body of water, but does not include sea planes.

.07 Operational Risk Management.

a. Operational Risk Management (ORM). A process involving several steps outlined in Appendix I of this Order. Operational risk management entails an examination of potential hazards to a boat in relation to design characteristics and nature of operations. A hierarchy of risk is established from this examination, and mitigation techniques are employed to best reduce risk and associated liability without sacrificing mission success or compromising the trust of any

group of stakeholders. The greatest stakeholder in all NOAA operations is the public and its trust.

b. Vessel Policy (VP). An operational risk management plan consisting of a compilation of instructions, guidelines, and regulations derived from the operational risk management process, intended to promulgate requirements and instructions to be followed by the operators of boats at a given Line Office program in order to reduce risk and increase safety.

c. Vessel Operations Manual (VOM). An operational risk management plan consisting of a compilation of instructions, guidelines, and regulations derived from the risk management process, intended to promulgate specific requirements and instructions for individual vessels.

.08 Procure. To purchase by means of exchanging money for things.

.09 Program Manager. A government employee in charge of, and having oversight over, a specific mission, activity, or scientific investigation at a Line Office field location. Examples of Program Managers include Chiefs of Fishery Ecology, Chief of Habitat Restoration, Chief of Ocean Chemistry.

.10 Responsible Person. A government or contract employee and should be involved in the routine oversight and/or operation of boats. Examples of Responsible Persons include, but are not limited to, marine superintendents, port captains, field operations managers, captains, boat operators, or boat maintenance staff.

.11 Senior Field Manager. A government employee in charge of and having responsibility for all boat operations conducted at a field unit or activity. Examples of Senior Field Managers include Laboratory Directors, Sanctuary Managers, Small Research Vessel Captains, or Field Party Chiefs. The Program Manager and Senior Field Manager may be the same person.

.12 Motorboat Classifications. NOAA motorboat classifications are developed from USCG definitions for motorboats, and apply to all boats propelled by machinery, as follows:

a. Class A - Less than 16 feet overall length;

b. Class I - 16 feet but less than 26 feet;

c. Class II - 26 feet but less than 40 feet;

d. Class III - 40 feet but not more than 65 feet;

e. Small Research Vessel (SRV) - Greater than 50 gross tons, but less than 300 gross tons and capable of conducting 24 hour operations.

.13 Vessel. See boat.

SECTION 4. SCOPE AND RESPONSIBILITY.

.01 Boats carried aboard NOAA Ships are under the direct control and management of the Office of Marine and Aviation Operations (OMAO) and are subject to the safety standards contained in OMAO Instruction 5100.1B change 1.0 Safety Standards for Ships of the NOAA Fleet.

.02 Line Offices shall be responsible for:

a. The safe operation, inspection compliance, life cycle management, and maintenance of boats owned, operated or under the direct operational control of the Line Office.

b. Committing resources dedicated solely to boat operations to ensure compliance with requirements of this Order.

c. Developing operational risk management plan(s), as described in Appendix I of this Order, for all boats owned, operated, or under the direct organizational control of their respective programs.

.03 OMAO shall be responsible for:

a. Serving as principal advisor and technical point of contact regarding operational and maintenance standards as it relates to policy and procedures set forth by this Order.

b. Developing inspection requirements based on an assessment of operational risk and associated applicable marine safety standards.

c. Managing a database containing an inventory of Class II and III motorboats and Small Research Vessels, including inspection standards and schedules, inspection results, deficiencies, corrective actions, and compliance.

d. Evaluating and providing advice to Senior Field Managers in the development of operational risk management plans.

e. Assisting Line Office activities, to the extent that resources allow, with altering, repairing, or surveying motorboats upon request. If there are costs associated with these services, the requesting Line Office activity will bear these costs.

f. Providing, upon Line Office request and to the extent that resources allow, marine engineering, electronics, procurement or acquisition, regulatory, and inspection support.

.04 OMAO and Line Offices are responsible for fostering a corporate culture which shall value the boat operator, encourage the sharing of information, seek a quality approach, share commitment, and manage risk in order to achieve safe boat operations and environmental stewardship.

SECTION 5. MOTORBOAT PROCUREMENT, ACQUISITION AND ALTERATION.

.01 Procurement of Motorboats.

a. Prior to initiating a motorboat procurement, the Senior Field Manager, in consultation with OMAO, shall perform a risk assessment to determine the suitability of the proposed motorboat, or design, in relation to operational requirements and environmental compliance.

b. The Senior Field Manager will take measures to ensure that contract specifications are written and/or reviewed by a qualified marine engineer or naval architect to make certain that the resultant craft will be properly configured with respect to safety, stability, mission capabilities, sound marine engineering practices, environmental compliance, and Appendix IV of this Order, NOAA Small Boat Visual Identification and Numbering.

c. Senior Field Management Officials may exempt Class A, I, or II motorboats from the requirement to conduct a risk assessment prior to procurement when the risk factors for the motorboat to be procured are already addressed or known from previous experience and the motorboat is:

1. a one-for-one replacement for an existing motorboat; or

2. in addition, and identical, to an existing motorboat.

d. Senior Field Managers may exempt a Class A, I, or II motorboat from the requirement to conduct an in depth risk assessment prior to procurement when the rapid procurement of the motorboat is deemed essential to the successful completion of a time critical mission.

.02 Acquisition of Motorboats. Prior to completing acquisition (for example, no-cost property transfer) of a motorboat, the Senior Field Manager shall:

a. conduct a risk assessment in conjunction with OMAO, and shall pay special attention to determine the potential safety and environmental

liability of the motorboat as it relates to ownership, operation, and eventual disposal of the motorboat;

b. conduct a survey of the motorboat by a qualified marine surveyor and/or marine engineer to determine the required modifications and/or repairs needed to deliver the motorboat to a satisfactory operating condition for the intended service; and

c. maintain records from the above risk assessment and survey will be maintained at the program field level, and be available during inspection periods.

.02 Alteration and Repair of Motorboats.

a. All alterations to NOAA motorboats shall be reviewed by the Program Manager or Responsible Person to assess their potential impact on safety, firefighting, lifesaving capabilities, watertight integrity, and stability. Program Managers are encouraged to contact the OMAO when doubt exists concerning potential impacts.

b. Alterations and repairs shall be performed in accordance with the more stringent applicable standards, rules, regulations or requirements promulgated by:

1. Code of Federal Regulations;

2. United States Coast Guard;

3. American Boat and Yacht Council;

4. American Bureau of Shipping;

5. Maritime industry common practice or standards;

6. International Maritime Organization;

7. American Welding Society;

8. Institute of Electrical and Electronics Engineers; or

9. American Society for Testing and Materials;

c. For all significant alterations, and if uncertainty exists regarding a repair, Senior Field Managers or Program Managers shall seek marine engineering services through OMAO, or a qualified marine engineer, to develop the description of work, and to oversee and approve contract fulfillment.

d. Line Offices are encouraged to follow the repair and maintenance standards set forth by the American Boat and Yacht Council. These directives are an excellent set of standards for the routine maintenance and repair of boats.

e. Records of all alterations to motorboats shall be maintained at the appropriate Line Office field activity.

f. Any alteration to a Class II or III motorboat or SRV which results in a redistribution of weight greater than 2% of the total vessel displacement tonnage requires prior review by OMAO or a qualified naval architect. The 2% weight distribution shall be a cumulative total maintained over the life of the motorboat.

SECTION 6. OPERATION OF BOATS.

.01 Operational Risk Management Plans. Every NOAA activity that operates boats shall develop operational risk management plans. Operational risk management plans shall be based on a risk assessment and shall, at a minimum, examine location and mission specific hazards to boats and their crews and the probability and severity of each hazard to determine a relative rank of inherent risks. The risk assessment will be used to determine motorboat operational, equipment, regulatory and inspection standards. Line Office activities shall develop a Vessel Operations Manual and/or a Program Vessel Policy depending on the size of boats owned and inherent risks associated with their operation. Responsibilities and guidance to perform such an assessment are provided in Appendix I to this Order.

.02 Vessel Operation Manual. Senior Field Managers, in consultation with their designated Responsible Person(s), shall develop Vessel Operation Manuals (VOMs) for each Class II or III motorboat or SRV owned, operated or under their direct organizational control. The VOM shall address the findings that result from Section 6.01 of this Order. A hypothetical VOM is included in Appendix I to this Order.

.03 Program Vessel Policy. Senior Field Managers, in consultation with their designated Responsible Person(s), shall develop a comprehensive Program Vessel Policy. In addition to addressing the policies and procedures promulgated by this Order, the Program Vessel Policy shall be tailored to address the inherent risks and specific regional issues common to all boats operated by a field activity regardless of size classification. A sample Program Vessel Policy is included as Appendix II to this Order.

.04 Cruise Plans.

a. All use of NOAA motorboats shall be documented by a cruise plan filed prior to departure giving, as a minimum:

1. the vessel name;

2. date and time of departure;

3. intended destination or working area;

4. estimated date and time of return or arrival;

5. names of persons on board;

6. the name and qualifications of the person in charge; and

7. emergency contacts.

Other significant facts may be included as desired.

b. The boat operator shall give the plan, prior to departure, to the next level of supervision as follows:

1. for voyages of less than twelve (12) hours, the plan may be given verbally;

2. for voyages of greater than twelve (12) hours duration, the cruise plan must be written and will establish a definite tracking and communications procedure that requires the boat to report its position and operations at least daily.

.05 Emergency Contacts. Senior Field Managers, or Program Managers, shall ensure that a 24-hour, 7 day per week, emergency contact system is in place for all boat operations.

.06 Pre-Cruise Testing of Safety Equipment. Operators of boats equipped with an EPIRB shall conduct an operational test of the unit prior to getting underway. In addition, the Responsible Person shall verify, on a routine basis, that the assigned beacon identification number has current emergency contact information on file.

.07 Transportation of Non-Government Personnel. When prearranged and approved by Senior Field Managers, or their designee, non-Government personnel may be transported on NOAA boats as passengers. Approvals will be granted only in those instances where it is found to be clearly in the interest of the Government, and, only when such boats are being used for official purposes and such passengers will not interfere with NOAA operations. The boat operator may authorize passage in emergencies involving the protection of life and property.

.08.08 Good Marine Practice. All NOAA boats shall be operated in a safe and courteous manner, and maintained in a seaworthy condition.

.09 Operator Training and Certification. All operators of NOAA boats shall be appropriately trained and certified based on boat size, engineering complexity, and nature of operations. Senior Field Managers shall use their discretion in administering operator training and certification requirements. At a minimum, the following training requirements apply:

a. NOAA Class III Motorboats and Small Research Vessels

1. Commissioned or Warrant Officers of the Uniformed Services who have qualified as Officer of the Deck (Underway) and who have exercised this qualification during the past five (5) years may be considered as having qualifications equivalent to the USCG licensed operators.

2. Other than officers mentioned in Section 6.09a.1. of this Order, all designated operators must possess a valid USCG license for the service intended.

b. NOAA Class A, I, or II Motorboats. At a minimum, operators of NOAA Class A, I, or II motorboats shall obtain proper qualification through participation in either a:

1. USCG Auxiliary;

2. U.S. Power Squadron (USPS);

3. US Department of the Treasury Marine Law Enforcement Training Program;

4. or equivalent USCG or OMAO approved training course.

The Program Vessel Operations Manual or Vessel Policy may require more rigorous requirements for certification and/or training of operators and may place additional emphasis on practical motorboat handling skills and prior experience.

c. CPR and First Aid Training. All boat operators shall have current Red Cross certification, or equivalent certification, in cardiopulmonary resuscitation (CPR) and First Aid.

d. Other Training Requirements. Senior Field Managers shall use their discretion in mandating additional operator training requirements. However, for boats operating in remote or potentially hostile areas, it is strongly recommended that a member of the sailing party be a qualified emergency medical technician (EMT). For boats operating in

or near National Wilderness or National Forests it is recommended that a member of the sailing party be trained in wilderness survival and/or use of small fire arms.

.10 Accident Reporting and Investigation.

a. Programs shall follow all existing policy regarding the reporting and investigation of accidents.

b. Senior Field Managers shall notify OMAO of a motorboat accident or incident when it involves any of the following:

1. unintentional grounding for greater than 24 hours;

2. explosions;

3. sinking;

4. fire;

5. collisions involving breach of hull integrity;

6. any incident involving a motorboat which results in damage in excess of $1000 by or to the motorboat, its systems or its equipment;

7. incapacitating injury requiring professional medical attention, hospitalization for greater than 72 hours, or loss of life of any person;

8. flooding; or

9. discharge of oil or any substance capable of producing a sheen upon the water.

c. When an accident meets the above criteria and the cause of such an accident is not clearly evident, the Line Office shall convene an investigation. Findings and recommendations from the investigation shall be made available to the Senior Field Manager, Program Manager, OMAO, OMAO Small Boat Coordinator and OMAO Small Boat Engineer.

d. Lessons learned from the accident and subsequent investigation shall be distributed, upon request, to the NOAA small boat user community and shall keep the identity of the NOAA Line Office, field activity, and associated personnel anonymous.

SECTION 7. INSPECTION OF MOTORBOATS.

.01 General. Inspection of NOAA motorboats is intended to promote safe operations through identification of deficiencies in complying with applicable regulation, material condition, prudent seamanship, and good marine practice.

.02 Inspection Criteria.

a. General. Class II and III motorboats and Small Research Vessel inspection criteria will be determined by OMAO, with Program involvement, based on operational risk management plans developed in accordance with Appendix I of this Order. Minimum inspection criteria for all motorboats are presented in Appendix III to this Order.

b. Safety, Fire Fighting, and Life Saving. The minimum safety, fire fighting, and life saving equipment requirements for motorboats of all classes are located in Table 1 to Appendix III of this Order. Supplemental equipment may be required by an operational risk management plan, or at the discretion of the Senior Field Manager, Program Manager or Responsible Person.

c. Communications. The minimum communications equipment requirements for motorboats are based on the distance from shore that the motorboat will operate and are located in Table 2 to Appendix III of this Order. Supplemental equipment may be required by an operational risk management plan, or at the discretion of the Senior Field Manager, Program Manager, or Responsible Person.

SECTION 8. SMALL BOAT IDENTIFICATION AND NUMBERING.

.01 General. A uniform identification and numbering scheme is necessary to promote and develop wide spread public recognition of NOAA small boat activities in the coastal environment.

.02 Compliance Guidelines. Visual identification and numbering requirements are provided in Appendix IV - NOAA Small Boat Visual Identification and Numbering to this Order.

SECTION 9. SMALL BOAT PROGRAM WEBSITE.

.01 General. A small boat program website shall be maintained to promote the exchange of safety management best practices and methods, serve as a pool of corporate knowledge, and provide training, engineering, and operational support resources to the NOAA small boat user community.

.02 Address. The small boat program website shall be located on the World Wide Web at the following address: http://www.sbp.noaa.gov/

SECTION 10. RECORDS MANAGEMENT.

.01 Inspection Reports. Maintained by OMAO.

.02 Operational Risk Management Plans. Maintained by Line Offices. Copies shall be filed with OMAO.

.03 Risk Assessment Records. Records from risk assessments, including but not limited to risk assessments conducted during the procurement, acquisition, alteration of motorboats, or development of operational standards and regulation will be maintained at the Line Office field activity, and shall be available for review during inspection periods.

.04 Alteration Records. Records of all alterations to motorboats shall be maintained at the appropriate program office and shall be made available for review during the inspection process.

.05 Operator Training Records. Operator training and certification records shall be maintained at the field activity. Records shall be made available for review during the inspection process.

.06 Boat Inventory. Boat inventories and hull identification number assignments shall be maintained by OMAO.

SECTION 11. REFERENCES.

The following references were used in the development of this Order and Appendices:

1. The Motor Boat Act of 1940;

2. The Federal Boat Safety Act of 1971 (46CFR24 Subchapter C - Uninspected Vessels);

3. Commercial Fishing Vessel Safety Act of 1988 (46CFR188);

4. 46CFR4.03-1 (Marine Casualty or Accident)

5. 46CFR175-187 (Subchapter T - Small Passenger Vessels Under 100 gross tons);

6. 46CFR188-196 (Subchapter U - Oceanographic Research Vessels);

7. OMAO Instruction 4720.2B;

8. OMAO Instruction 4790.1B;

9. OMAO Instruction 9820B;

10. OMAO Instruction 5100.1B, Change 1.0;

11. UNOLS Small Research Vessel Compendium;

12. NOAA Motorboat Inspection Program Guidelines;

13. Florida Keys National Marine Sanctuary Vessel Policy Manual.

14. USCG Risk Based Decision Making World Wide Web Site

15. American Boat and Yacht Council, *Standards and Technical Information Reports for Small Craft*.

16. American Boat and Yacht Council, *Rules and Regulations for Recreational Boats*.

SECTION 12. EFFECT ON OTHER ISSUANCES.

This Order supersedes NOAA Administrative Order (NAO) 217-103 dated 06/20/91.

Attachments:

Figure 1.0 Administrative InteractionFlow Chart

Appendix I - NOAA Small Boat Operational Risk Management Program

Appendix II - Sample Program Vessel Policy

Appendix III - NOAA Motorboat Inspection

Appendix IV - NOAA Small Boat Visual Identification and Numbering